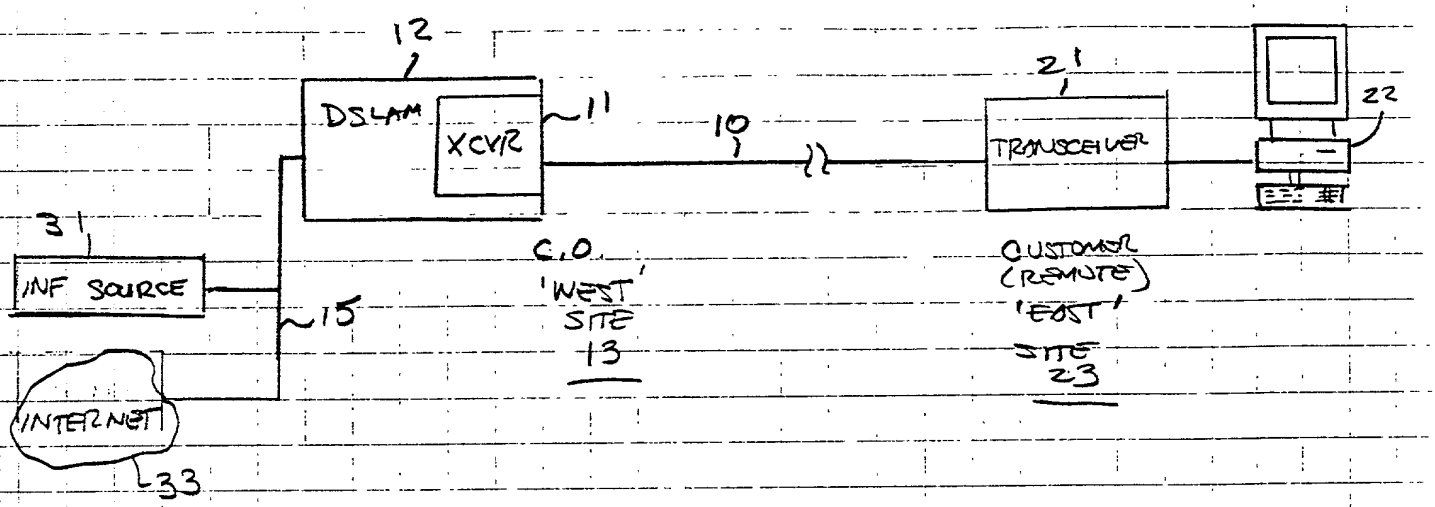


FIGURE 1 (PRIOR ART)

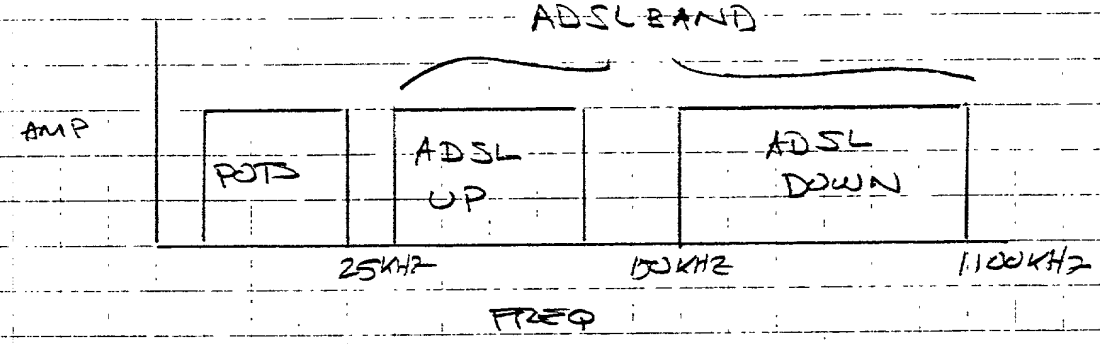
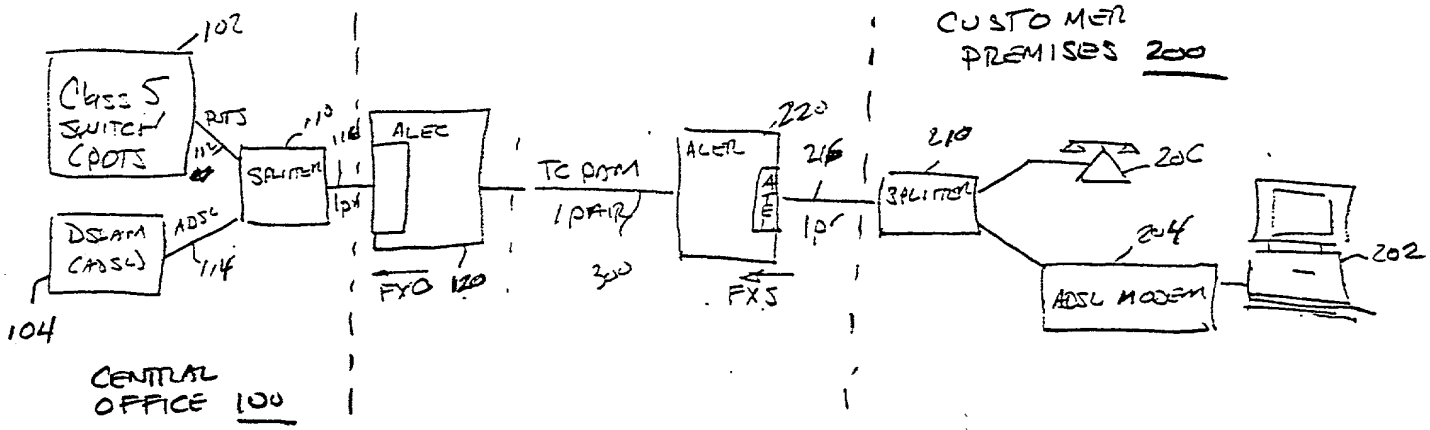


FIG 2 (PRIOR ART)

FIGURE 3



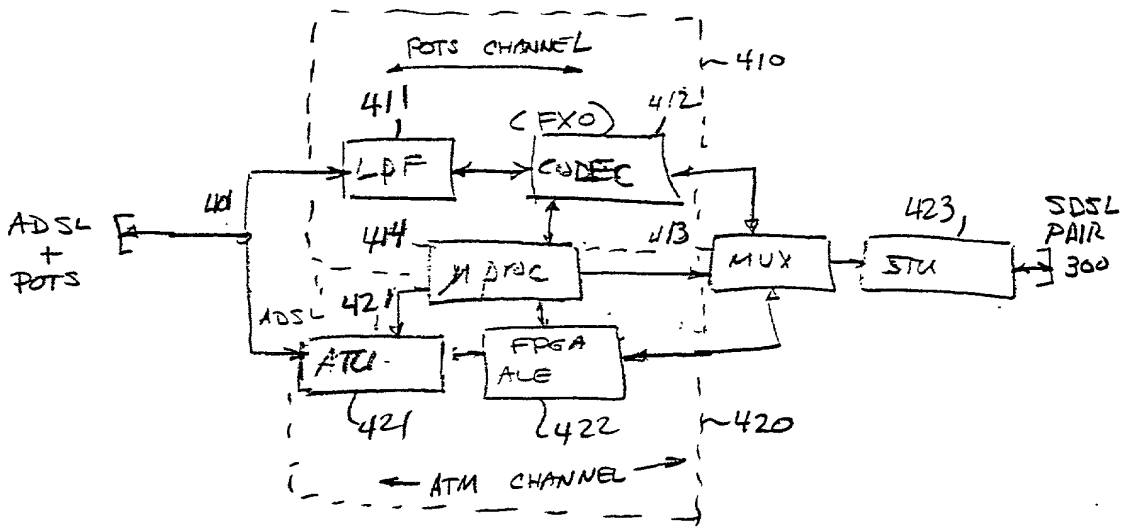


FIGURE 4

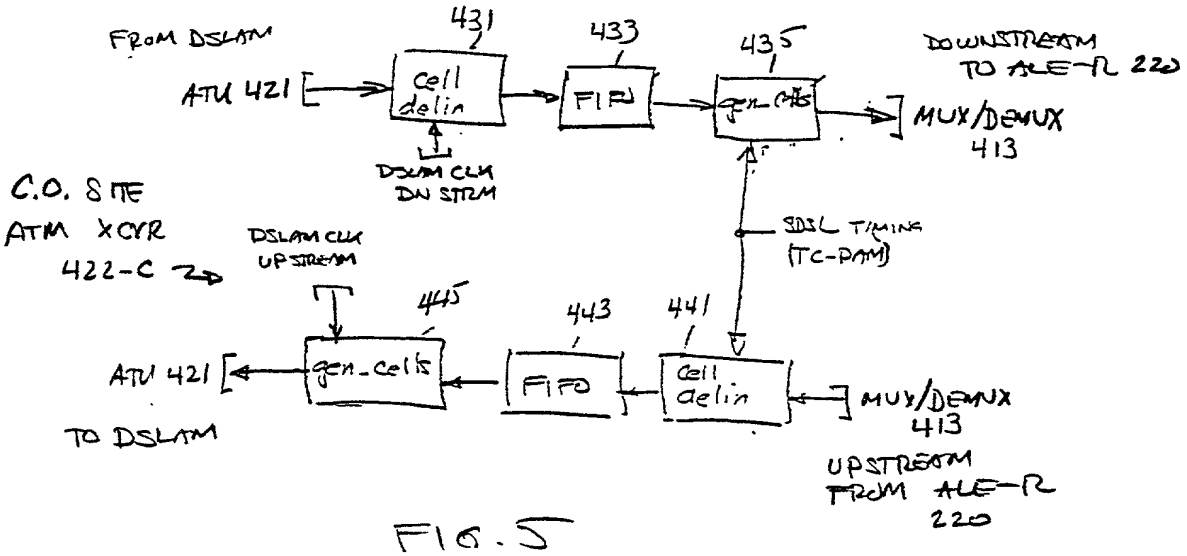

FROM DSLAM
ATM 421
431
Cell delin
433
FIFO
435
gen cells
DOWNSTREAM TO ALE-R 220
MUX/DEMUX 413
DSLAM CLK DN STRM
C.O. SITE
ATM XCVR 422-C
DSLAM CLK UPSTREAM
SDSL TIMING (TC-PAM)
445
gen_cells
443
FIFO
441
Cell delin
ATM 421
TO DSLAM
MUX/DEMUX 413
UPSTREAM FROM ALE-R 220

FIG. 5

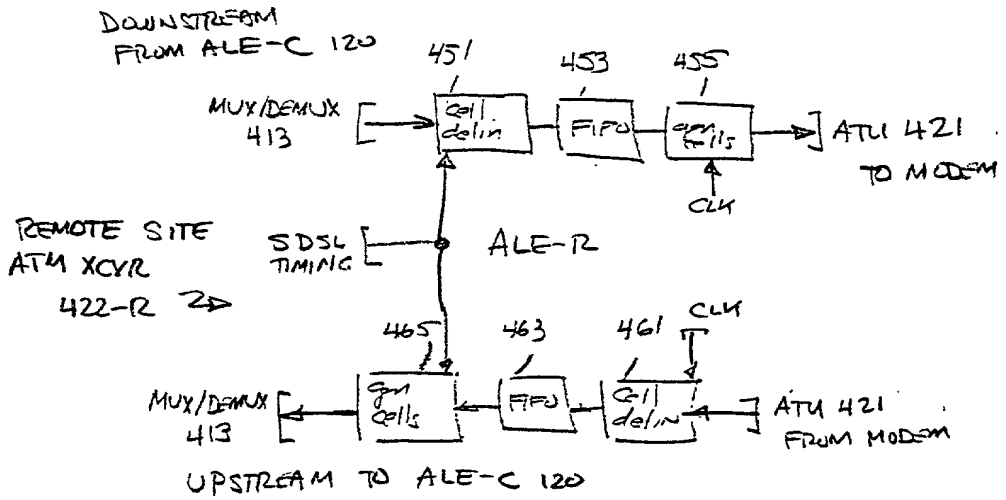

DOWNSTREAM FROM ALE-C 120
451
Cell delin
453
FIFO
455
gen cells
MUX/DEMUX 413
ATM 421 TO MODEM
CLK
REMOTE SITE ATM XCVR 422-R
SDSL TIMING
ALE-R
465
gen cells
463
FIFO
461
Cell delin
CLK
MUX/DEMUX 413
ATM 421 FROM MODEM
UPSTREAM TO ALE-C 120

FIG. 6

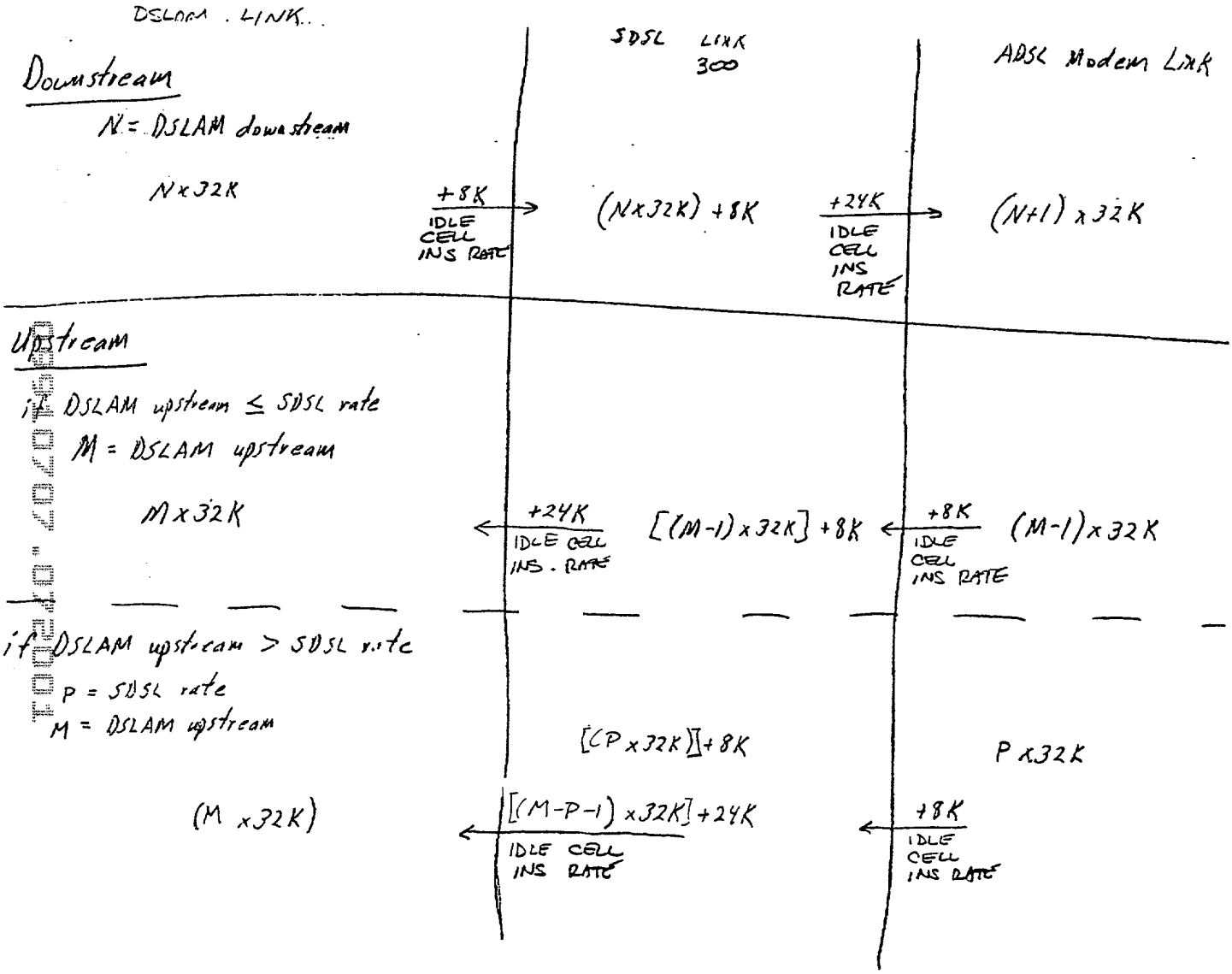

DSLAM LINK
SDSL LINK 300
ADSL Modem Link
Downstream
N = DSLAM downstream
N x 32K
+8K IDLE CELL INS RATE
(N x 32K) + 8K
+24K IDLE CELL INS RATE
(N+1) x 32K
Upstream
if DSLAM upstream ≤ SDSL rate
M = DSLAM upstream
M x 32K
+24K IDLE CELL INS. RATE
[(M-1) x 32K] + 8K
+8K IDLE CELL INS RATE
(M-1) x 32K
if DSLAM upstream > SDSL rate
P = SDSL rate
M = DSLAM upstream
[CP x 32K] + 8K
P x 32K
(M x 32K)
[(M-P-1) x 32K] + 24K
IDLE CELL INS RATE
+8K IDLE CELL INS RATE

FIGURE 7